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1977
May



Montana Department of Health and Environmental Sciences
MONTHLY ACTIVITIES REPORT OF THE AIR QUALITY BUREAU

May, 1977

STATE DOCUMENTS

AUG 9 '77

1. Highlights

Continued work on Kalispell TSP project.

Proposed study efforts for HB 250 health study (MAPS).

Updated Emission Inventory.

2. Ambient Air Quality Network

Standards Exceeded:

SO₂ -- East Station, East Helena, 5 excur. MT 1-hr std.
Saddle Mountain, 1 excur. MT 1-hr std.
Microwave Tower, 3 excur. MT 1-hr std.
Mill Creek, Anaconda area, 6 excur. MT 1-hr std.
C-Hill, 12 excur. MT 1-hr, 1 excur. MT 24-hr., 1 excur. Fed. 3-hr. std.
Hiway Jct., 14 excur. MT 1-hr std.
Post Office, 17 excur. MT 1-hr std., 1 excur. Fed. 24-hr. std.

Lame Deer - 240 micrograms/m³ TSP*
Kalispell - 155 micrograms/m³ TSP*

*Total Suspended Particulate

Air Stagnation Advisories:

None issued during May.

Laboratory Status:

Total determinations for the month: 171
Total samples for the month: 171

Developments:

Routine maintenance and calibration of equipment done in state.

Spent 4 days locating soil and vegetation sampling sites, collecting soil samples.

3. Permits and Tax Credits

Construction Permits Applied for:

James Zion, Dawson Co., portable gravel crusher
Robert Tindall, Choteau Co., hot mix dryer drum mixer
Anaconda Co., Anaconda, baghouse dust collector
Anaconda Co., Anaconda, new stack - expansion of acid plant
Gus Albert, Custer Co., portable gravel crushing plant

MSL SEP 14 '77

3. Permits and Tax Credits - Cont.

Mortenson Construction, Teton Co., gravel crushing plant
Baltrusch Const. Co., Gallatin Co., asphalt hot mix plant
W. R. Grace Co., Libby, air pollution control equipment
James Zion, Richland Co., portable gravel crushing plant

Construction Permits Approved:

Powder River Nursing Home, Broadus, Kewanee boiler
Thunderbird Resources, Westco Refinery, hydrotreating and reforming
process unit
James Zion, Dawson Co., portable gravel crusher
Robert Tindall, Choteau Co., hot mix dryer drum mixer
Anaconda Co., Anaconda, baghouse dust collector
Gus Albert, Custer Co., portable gravel crushing plant
Mortenson Construction, Teton Co., gravel crushing plant
Baltrusch Const. Co., Gallatin Co., asphalt hot mix plant
James Zion, Richland Co., portable gravel crushing plant

Tax Credits:

None Received in May.

4. Variance Status

Current Variances:

Anaconda Aluminum Co., Columbia Falls, F⁻ and particulate, expires 6/30/77
The Anaconda Co., Anaconda, SO₂, expires 6/30/77
ASARCO, Inc., East Helena, SO₂, expires 6/30/77

New or Renewed:

Anaconda's application for a variance from the visibility rule for the smelter has been scheduled for the June Board meeting.

Anaconda's application for a renewal of the variance from the particulate emission rule for the smelter has been scheduled for the June meeting. The need for this extension has disappeared since the last reverberatory furnace was shut down about March 7.

Anaconda's application for a variance from the particulate emission rule for the foundry at Anaconda has been scheduled for the June Board meeting.

Variances - New or Renewed, Cont.

Anaconda Company's SO₂ variance renewal request has been scheduled for July Board meeting.

ASARCO, Inc., at East Helena, has applied for one-year variance renewal for lead plant.

Anaconda Aluminum has applied for renewal on F⁻ and particulate variance.

5. Enforcement Action

Citations:

Hoerner-Waldorf, Missoula, TRS-#3 recovery boiler, S1400, 6 violations (Permits, Construction and Operation of Equipment)

Wickes Forest Industries, Townsend, (Visible Emissions, Wood Waste Burners) S14030

Notices of Violation:

None

Order for Corrective Action:

Wickes Forest Industries, Townsend, Teepee burner modification, final date August 1, 1977

Court Actions:

Department filed suit in Lake, Sanders, Lincoln and Flathead Counties to prohibit them from allowing open burning without a permit. District Judge ruled in Department's favor and ordered Lincoln County to pay court costs and attorneys fees.

6. Teepee Burner and Open Burning

The proposed changes in the open burning rule will be heard at the June 27 Board meeting.

Teepee Burner Status:

No. at Start	39
New starts	0
Shutdowns	0
No. at end	39

Open Burning Permits:

Kalispell Office	- 310
Cascade County	- 18
Lake County	- 32
Missoula County	- 12

Sanders County	- 127
Yellowstone County	- 54
Rest of State	- 1228
Total Permits	1781

7. Source Tests Performed

Agency Source Tests:

None

Non-Agency Source Tests:

Y.S. & B Laboratories of Billings tested Colstrip Unit #1 for NSPS compliance.

Hoerner-Waldorf, Missoula, 19 particulate tests on recovery boilers, lime kilns, slashers, smelt tanks and hogged fuel boilers - all in compliance.

Observed source tests at Montana Sulfur & Chemical Company, tail gas incinerator.

8. Field Investigations

Anaconda Smelter, Anaconda SO₂ problems
Silver City, tepee burner, inspection - no violation
Tepee burners, Livingston, no violations
Colstrip Unit #1, opacity observation, follow-up
Silver Bow County, hot mix plant, observation
Wickes Forest Industries, Townsend, tepee burners, Citation, Order for
Corrective Action, inspection and opacity observation
Yellowstone Pine, Belgrade, tepee burner
Cokedale Road, Livingston, fugitive dust
Joslyn Avenue, Helena, fugitive dust
East Helena, odor and throat irritation
Cenex Seed Company, Miles City, inspection
Ekalaka, Hospital, Ekalaka, incinerator
Montana Sulfur and Chemical Company
Cyprus Industrial Minerals, Three Forks, inspection and opacity observation
St. Regis Lumber, Libby, boiler 7 & 9, documentation
Diehl Lumber, Plains, boiler violation, tepee burner okay, conference
Right of way burning with BNR, Columbia Falls to Summit
American Timber, Olney, tepee, (40%) violation - corrected
Louisiana Pacific Lumber, Columbia Falls, tepee burner, (50%) violation, corrected
Plum Creek Fiberboard, Columbia Falls, conference regarding cyclone chip bin
Superior Building, Columbia Falls, tepee burner 100% corrected
Plum Creek #3, Columbia Falls, dryer emission, conference
American Asphalt, Kalispell, documentation, no violation

9. Complaints

Great Western, Billings, odors from ponds, investigation
Mobile City Trailer Park, Helena, fugitive dust, investigation
Joslyn Avenue, Helena, fugitive dust, investigation and follow-up
East Helena, odor and throat irritation, investigation
Park City, open burning of buildings and tarpaper, written reprimand
Riverside Sawmill, Roundup, burning trade waste, follow-up

9. Complaints - Cont.

Flathead County Courthouse Annex Welfare Office, irritants to workers
Plum Creek, emissions
Coram, road dust
Cokedale Road, Livingston, excessive dust, investigating
ASARCO, East Smelter, emissions, investigating
Scratch Gravel Dump, Helena, open burning, investigating

10. Data Processing Services

Ambient Data Summary:

Monthly report of April air quality data attached

Emissions Inventory Status:

Updates were received and processed.

Submitted updated inventory forms for Great Western Sugar, Corette Plant and Lewis & Clark Plant.

Prevention of Significant Deterioration:

Wrote second letter to person in Noxon regarding further inquiry into regulations.

Discussed Northern Cheyenne redesignation with Wyoming Governor's Office.

Modeling:

Significant portion of time was spent in diffusion modeling analysis of Billings AQMA SO₂.

Public hearing was attended in Denver on draft guideline for diffusion modeling sponsored by EPA.

11. Environmental Impact Statements

Agency Impact Determinations:

None

Other Agency EIS's Reviewed:

None

12. Status of Studies, Contracts and Reports

Poplar River Study - lightning caused some problems with instruments, but all are operating now.

Kalispell - instructed operators on use of pilot balloon timer; Cabin Creek site viewed.

Pacific Environmental Services is working on report on Arizona smelter inspection trip and recommendations for improvements at Anaconda.

12. Status of Studies, Cont.

State's modeling for Billings SO₂ air quality maintenance plan was discussed in Denver; additional information, corrections to model and use of different dispersion equations were discussed.

ASARCO, Troy Project, background study, secured power for two stations.

Cascade County program draft audit report prepared.

Hoerner-Waldorf test observation report 90% complete.

Billings CO, TSP, SO₂ work continuing.

Missoula TSP - work continuing.

S.E. Coal area - work going well.

Butte--Anaconda Company contacted for the first time.

Health Study Phase I - EPA is reviewing data submitted by Bureau of Records and Statistics.

Health Study, Phase II - awaiting EPA's review of data from Phase I.

MAPS I - working on study design.

Colstrip - Montana Power Company monitoring study--plotting monitor locations and looking into new site locations and total network design.

13. Schools and Training

Smoke Management Workshop, Missoula, May 23-25, 1977

Instructed Great Falls air pollution agency on how to correctly perform hi-vol calibration and data reduction

Instructed Decker Coal Company on methods of operation, calibration, and data processing of hi-vol data

14. Public Hearings and Meetings

Public Hearings:

Board of Health met to allow Montana Power Company equal time to refute allegations put forth by Northern Plains Resource Council. Board will make final decision on action after receiving Department's recommendations June 26.

Meetings Attended:

Air Quality Advisory Council, Helena, open burning regulations
Helena, health study
Scobey SCS representatives and Board, Poplar River Study
DNR and staff, Circle West Study

14. Public Hearings and Meetings, Cont.

DNR and ERT representatives, Circle West study
EPA and staff, Billings AQMA SO₂
Met with EPA, Billings industries and staff, Billings AQMA
Stillwater River Project, Bill Marlatt, to discuss analysis of calcium
formate papers
Cascade County, program audit
W. R. Grace, Libby, in Helena, regarding permit application
Roland Feeds, regarding permit application
Met with Oleda, FHWA, regarding SIP
Highway Impact Evaluation Group, Helena
AQMA Public Information Program, Billings
S.E. Coal Area, citizen participation, Northern Plains Resource Council,
Billings
Montana Association of Planner to develop and maintain contacts with
land-use planners
Three Forks, mayor, fugitive dust
Stauffer Chemical Company, air sampling problems
Rockwell, future audits of Helena and Anaconda-Butte area
Northern Light & Power Co., Sandpoint, Idaho, completed plans for
power line construction for ASARCO air quality sites

Intra-Staff Meetings:

Health Study, Helena
SO₂ AQMA, Billings, in Helena and Denver
Cascade County program audit, Helena
NSPS, in Helena
ASARCO Troy Project in Helena
S.E. Coal Area AQMA regarding violations at Colstrip, research needs

15. Public Information Requests

Rules - 14
Clean Air Act - none
General Information - 9

16. None

17. Other

Quarterly report of air quality data sent to EPA

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

April 1977

Pollutant: Total Suspended Particulate Units: $\mu\text{g}/\text{m}^3$

AQCR	AREA	HIGH READING			ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
140	Morton Residence	122	148	208	45.7	4	
	Big Horn Co. Warren Ranch	46	46	146	13.4	4	
	Big Horn Co. Lockwood School	91	109	141	41.9	4	
	Billings	83	83	154	34.1	4	
	KGHL	97	151	151	65.5	4	
	Billings City Hall	101	101	135	50.1	4	
	Grand Ave. Sch.	688	688	1117	306.8	4	4 excur. Fed. Prim. Std.
	Billings Burnstead Drive	57	57	108	32.1	4	
	Billings Laurel Jr. High	95	129	129	39.7	4	
141	Hospital Roof	177	869	869	97.1	4	2 excur. Fed. Sec. Std.
	Great Falls Fire Sta. #1						
	Great Falls						
142	S11. Bow Gen. H						
	Butte						
	Atkins Res.						
	Butte						
	Richer Res.						
	Butte						
	Hiway Jct.	97	121	250	47.0	4	
	Anaconda						
	McKinley Res.	57	90	117	35.2	4	
	Granite Co.						

*Equipment down - no data

Pollutant: Total Suspended Particulate Units: $\mu\text{g}/\text{m}^3$

AQCR	AREA	HIGH READING			ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
142	Microwave	45	52	66	20.6	4	
	Jefferson Co. 212 Pacific Ave.	133	149	187	73.3	4	
	Lewis & Clark Tierney Res.						
143	Silver Bow Co. Littlefield Hill						
	Miles City	51	102	102	28.5	4	
	Glendive	75	91	91	37.6	4	
	Dawson County Fort Pack	29	51	62	15.8	4	
	McCone Co. Broadus	71	93	104	37.7	4	
	Powder Riv. Co. BN Site	102	102	102	17.9	4	
	Colstrip	212	212	294	81.2	4	3 excur. Fed. Sec. 1 excur. MT. Prim.
144	McRae Site	261	295	342	113.6	4	3 excur. Fed. Sec. 1 excur. Fed. Prim.
	Colstrip	111	140	214	56.9	4	
	High School Col. Falls	255	255	255	53.5	4	1 excur. Fed. Sec. 1 excur. MT. Prim.
	Missoula Co. Courthouse	177	177	177	88.6	4	2 excur. Fed. Sec.
	Missoula Co. J. B. Field	122	122	122	122.0	1	
	Missoula Co. Frenchtown						
	Missoula Co. Kalispell						
	Missoula Co. Flathead Co. Troy						
	Missoula Co.						

*Equipment down - no data

Pollutant: Miscellaneous Continuous Ozone Units: parts per million

AQCR	AREA	HIGH READING			ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
140	Carbon Monoxide						
	11th & S. 27th						
	Billings	7.20	13.50	27.50	2.909	4	
144	27th & Montana	17.4	17.5	17.5	4.940	3	
	Billings						
	Malfunction Jct.						
	Missoula						
140	Hydrocarbons	6.90	6.90	10.20	2.156	4	
	27th & Montana	1.55	2.70	3.50	1.231	4	
143	BN Site	1.55	2.20	2.20	1.240	4	
	Colstrip						
143	Hydrocarbons	0.14	0.15	2.00	0.022	4	
	BN Site						
	Colstrip						
143	Nitric Oxide						
	BN Site						
	Colstrip						
140	Nitrogen Dioxide	0.00	0.08	0.11	0.012	4	
	27th & Montana						
142	Alpine West						
	Butte						

**Equipment down - no data

***Site no longer in operation

***data not available at time of report

Pollutant: Miscellaneous Continuous Ozone Units: parts per million

AQCR	AREA	HIGH READING			ARITHMETIC AVER.		Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
143	Nitrogen Dioxide						
	BN Site						
	Colstrip						
143	Oxides of Nitrogen						
	BN Site						
	Colstrip						
140	Ozone	0.06	0.06	0.10	0.017	4	
	27th & Montana						
143	BN Site						
	Colstrip						
140	Sulfur Dioxide	0.20	0.20	0.20	0.002	4	
	27th & Montana	0.32	0.61	0.80	0.070	4	7 excur. MT 1-hr. 1 excur. NT 24-hr.
	Billings Laurel Farm						
	Billings Laurel Meter Pit						
142	Billings East Stack	0.24	0.25	0.44	0.012	4	
	E. Helena	0.51	0.51	1.08	0.011	4	5 excur. MT 1-hr. standard
	Microwave	0.37	0.48	0.56	0.013	4	4 excur. MT 1-hr. standard
	Saddle Mountain	1.77	1.77	2.54	0.009	4	1 excur. Fed. Sec. 2 excur. MT 24-hr.
	E. Helena						
	C-Hill						
	Anaconda						

**Site no longer in operation

***data not available at time of report

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA
April 1977

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Pollutant: Miscellaneous Continuous Data Units: parts per million

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.			Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
142	Sulfur Dioxide Hiway Junction Anaconda	0.65	1.46	1.58	0.031	4	14 excur. MT 1-hr. standard
	Hill Creek Anaconda	0.40	0.88	1.36	0.018	4	6 excur. MT 1-hr. standard
	Post Office Anaconda	0.90	0.90	1.02	0.008	4	1 excur. Fed. Sec. 2 excur. MT 24-hr
	Cogswell Bldg. Helena	0.22	0.40	0.40	0.006	4	
143	BN Site Colstrip	0.10	0.10	0.10	0.003	4	

Pollutant: Miscellaneous Indicators Units:

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.			Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
142	FLUORIDE PAPERS Mittenburg Powell County Lahman's Powell County N Ac Hwy Powell County Ramsay West S11. Bow County ESE Stauffer S11. Bow County	mg/sq. cm./30 days	***	***	***	***	
143	BN Site Colstrip McRae Site Colstrip	***	***	***	***	***	
144	Dehlborn's Mt. Box Flathead Co. Anaconda South Flathead County Glac. Park #1 Glac. Natl. Park Glac. Park #2 Glac. Natl. Park	***	***	***	***	***	
142	FLUORIDE PLATES Durant Canyon Ozer Lodge Co. N Ac Hwy Powell County NW on Hill Powell County	mg/sq. cm./30 days	***	***	***	***	

***Data not available at time of report

Pollutant: Miscellaneous Indicators

Units:

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.			Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
142	FLUORIDE PLATES Ramsay West Silver Bow Co. ESE Stauffer Silver Bow Co.	***	***	***	***	***	
143	BN Site Colstrip McRae Site Colstrip	***	***	***	***	***	
144	Teakettle #6 Flathead Co. Anaconda South Flathead Co. Glac. Park #1 Glac. Natl. Park Glac. Park #2 Glac. Natl. Park	5.790	5.790	8.820	3.555	4	
		0.470	0.610	0.720	0.492	4	
141	OUTFALL - Tons Mountain States Great Falls Fire Sta. #1 Great Falls Fairgrounds Great Falls	9.62	48.15	48.15	25.64	4	
		23.23	23.75	27.02	19.04	4	
		7.48	8.50	8.50	7.41	4	
140	SULFATION RATE - 3/8 mt. NE Coop Billings East of Laurel Billings	mg O ₃ /100 sq. cm.	***	***	***	***	

***Data not available at time of report

Pollutant: Miscellaneous Indicators

Units:

AQCR	Site Location	HIGH READING		ARITHMETIC AVER.			Comments
		Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	
140	Sulfation Rate Hi-Ball Trucking Billings	***	***	***	***	***	
141	Stock Car Track Great Falls Phillips Ref. N1 Great Falls Phillips Ref. E Great Falls McRae Site E. Helena	0.128	0.607	0.607	0.408	4	
		0.228	0.629	0.629	0.447	4	
		0.036	0.575	0.575	0.315	4	
142	Great Falls Hiway Junction Anaconda C-Hill Anaconda	0.290	0.650	0.650	0.375	4	
143	BN Site Colstrip McRae Site Colstrip	***	***	***	***	***	

***Data not available at time of report

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Units: parts per million

AREA		WICH READING			ARITHMETIC AVER.		
ACCR	Site location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Runs of Data	Comments
140	Sulfur Dioxide Lockwood School Billings	0.0611	0.0611	0.2012	0.0161	4	
	3/8 Mi. NE Coop Billings			---			
143	Scobey Daniels Co.	0.0	0.0	0.0	0.0	4	
	Ft. Peck	0.0	0.0	0.0	0.0	4	
	McCono Co.			0.0	0.0	4	
	Lane Deer	0.0	0.0	0.0	0.0	4	
	Rosebud Co.						
	BN Site			---			
	Colstrip			---			
	McRae Site						
	Colstrip						
143	Nitrogen Dioxide Scobey	0.0	0.005	0.008	0.006	4	
	Daniels Co.	0.0	0.0	0.003	0.0	4	
	Ft. Peck						
	McCono Co.	0.0	0.0070	0.0110	0.0013	4	
	Lane Deer						
	Rosebud Co.						
	BN Site			---			
	Colstrip			---			
	McRae Site						
	Colstrip						

***Data not available at time of report

Polytanti

Units:

Pollutant:		HIGH READING		ARITHMETIC AVER.			
POCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments

Pollutant:

Unit 10

AREA		HIGH READING		ARITHMETIC AVER.		Comments
AQCR	Site Location	Current Month	Year-to-Date	Running Year	No. of Years to-Date	

Pollutants:

Units:

[illegible]

